Supplementary Online Content

Yau AYY, Manuel C, Hussain SF, Protsenko DE, Wong BJF. In vivo needle-based electromechanical reshaping of pinnae: New Zealand white rabbit model. *JAMA Facial Plast Surg.* Published online May 22, 2014. doi:10.1001/jamafacial.2014.85

eFigure 1. In Vivo Electromechanical Reshaping (EMR) of Intact Ears in a New Zealand White Rabbit Model

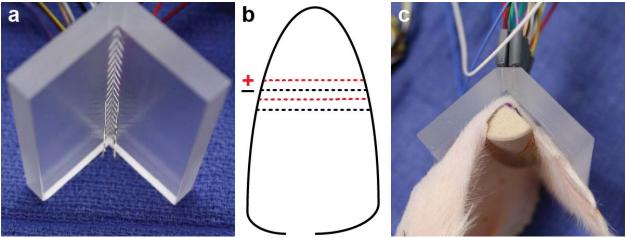
eFigure 2. Electromechanically Reshaped Ears

eFigure 3. Relationships of Charge Transferred and Cartilage Thickness to Bend Angle

eFigure 4. Histologic Preservation of the Gross Ear Sample Showing Preserved Shape Change After Treatment (5 V for 4 Minutes)

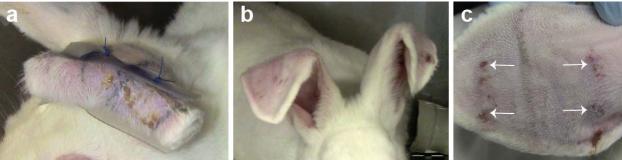
This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. *In vivo* electromechanical reshaping (EMR) of intact ears in a New Zealand white rabbit model.



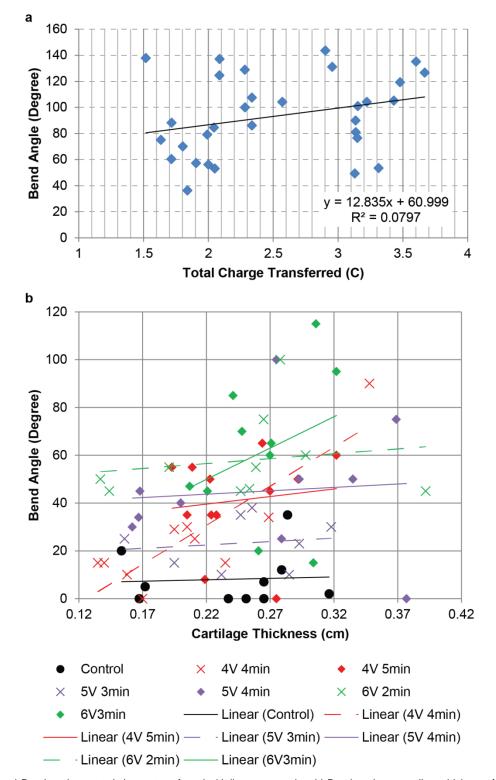
a) Bending jig showing 90° curvature and two rows of needle electrodes seen *en face*. b) Schematic representation of rabbit ear where electrodes were inserted. Red indicates cathode electrodes, black anode. c) *In vivo* EMR treatment of the ear.

eFigure 2. Electromechanical reshaped ears.



a) 3 days, bolsters in place. Exudative crusting on ear surface. b) 3 months, bolsters removed; ears holding shape. c) 3 months, bolsters removed; ear flattened to show no gross damage to ears. Arrows indicate where bolster sutures were.

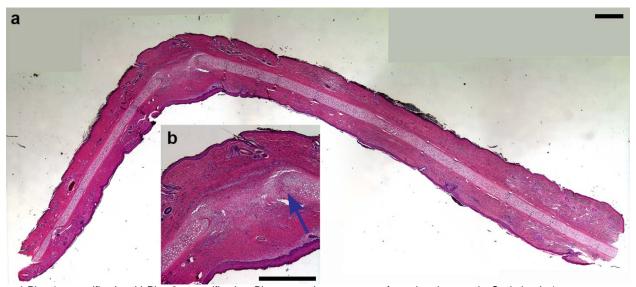
eFigure 3: Relationships of charge transferred and cartilage thickness to bend angle.



a) Bend angle vs. total charge transferred with linear regression. b) Bend angle vs. cartilage thickness for each dosimetry and corresponding linear regression. R² values for control, 4V 4min, 4V 5min, 5V 3min, 5V 4min, 6V 2min, 6V 3min are 0.0033, 0.7409, 0.016, 0.0195, 0.0075, 0.0307, 0.097, respectively.

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eFigure 4. Histological preservation of the gross ear sample showing preserved shape change after treatment (5V 4 minutes).



a) Plan 1x magnification. b) Plan 2x magnification. Blue arrow shows an area of neochondrogenesis. Scale bar is 1 mm.